

## CLAIMS:

1. A multi-view image generation unit (100, 200) for generating a multi-view image on basis of an input image, the generation unit comprising:
  - edge detection means (102) for detecting an edge in the input image;
  - depth map generation means (104) for generating a depth map for the input
- 5 image on basis of the edge, a first group of elements of the depth map corresponding to the edge having a first depth value, related to a viewer of the multi-view image, and a second group of elements of the depth map corresponding to a region of the input image, being located adjacent to the edge, having a second depth value, related to the viewer of the multi-view image, the first value being less than the second value; and
- 10 - rendering means (106) for rendering the multi-view image on basis of the input image and the depth map.
2. A multi-view image generation unit (100) as claimed in claim 1, wherein the edge detection means (102) are arranged to detect the edge by computing pixel value
- 15 differences between first pixel values of the input image and respective second pixel values of a second input image, the input image and the second input image belonging to a sequence of video images.
3. A multi-view image generation unit (100) as claimed in claim 2, wherein the
- 20 first pixel values represent one of color and luminance.
4. A multi-view image generation unit (100) as claimed in claim 2, wherein the first depth value is a function of a first one of the pixel value differences.
- 25 5. A multi-view image generation unit (200) as claimed in claim 1, wherein the edge detection means (102) are arranged to detect the edge on basis of a motion vector field being computed on basis of the input image and a second input image, the input image and the second input image belonging to a sequence of video images.

6. A multi-view image generation unit (200) as claimed in claim 5, wherein the edge detection means (102) are arranged to detect the edge by means of computing motion vector differences of neighboring motion vectors of the motion vector field.
- 5 7. A multi-view image generation unit (200) as claimed in claim 6, wherein the first depth value is a function of a first one of the motion vector differences.
8. An image processing apparatus (600) comprising:
- receiving means (602) for receiving a signal corresponding to an input image;
- 10 and
- a multi-view image generation unit (604) for generating a multi-view image on basis of the input image, as claimed in claim 1.
9. An image processing apparatus (600) as claimed in claim 8, further
- 15 comprising a multi-view display device (606) for displaying the multi-view image.
10. A method of generating a multi-view image on basis of an input image, the method comprising:
- detecting an edge in the input image;
- 20 - generating a depth map for the input image on basis of the edge, a first group of elements of the depth map corresponding to the edge having a first depth value, related to a viewer of the multi-view image, and a second group of elements of the depth map corresponding to a region of the input image, being located adjacent to the edge, having a second depth value, related to the viewer of the multi-view image, the first value being less
- 25 than the second value; and
- rendering the multi-view image on basis of the input image and the depth map.
11. A computer program product to be loaded by a computer arrangement, comprising instructions to generate a multi-view image on basis of an input image, the
- 30 computer arrangement comprising processing means and a memory, the computer program product, after being loaded, providing said processing means with the capability to carry out:
- detecting an edge in the input image;
  - generating a depth map for the input image on basis of the edge, a first group of elements of the depth map corresponding to the edge having a first depth value, related to

a viewer of the multi-view image, and a second group of elements of the depth map corresponding to a region of the input image, being located adjacent to the edge, having a second depth value, related to the viewer of the multi-view image, the first value being less than the second value; and

- 5 - rendering the multi-view image on basis of the input image and the depth map